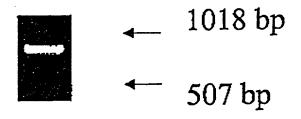


Fig. 1

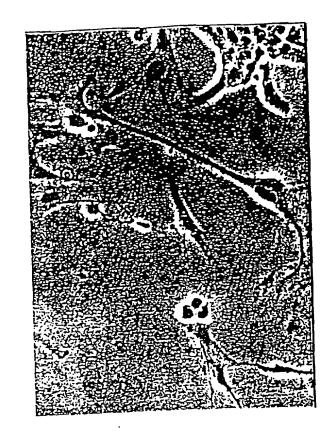
Figure 2

Nestin RT-PCR of 50 rat islets



Amplification of a single band of the correct size of 834 bp. In between the forward [GCGGGCGTGCGTGACTAC] and reverse primer [GGGTGGTGAGGGTTGAGGTTTGTG] are 3 introns located.

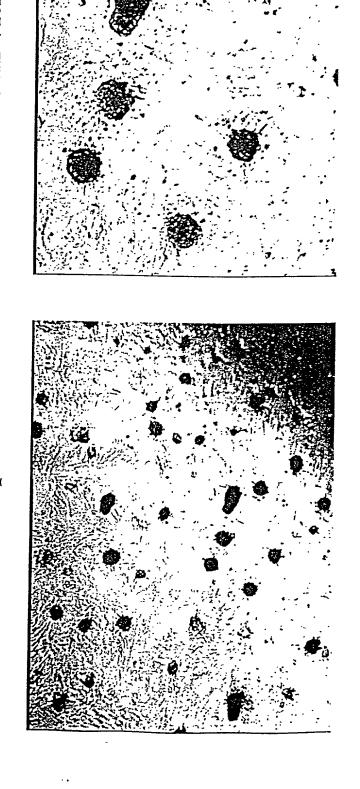
Nestin positive cells proliferate around islets in vitro



Phase contrast image of cells surrounding cultured islets (200x)

Figure #

Development of islet-like structures in vitro



200x

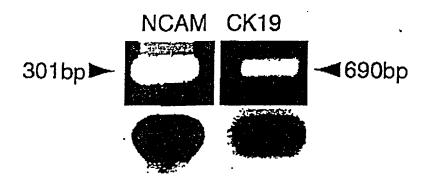


Fig. 5

Figure? 6

Induction of nestin mRNA expression by high glucose in pancreatic islets

RT-PCR of 50 rat islets incubated for 4 days at 5.6 mM or 16.7 mM glucos

APRT

Nestin	high glucose		32 34	3.18 2.91
		i i	34	-
	low glucose		,32	
AFKI	high glucose		27	1.69
	high g		56	1.74
	low glucose	lucose	27	ratio high/low glucose
	low g		70	nigh/low
			cycle	ratio l

Figure 7 (v)

Nestin Amino Acid Sequence:

"MEGCMGEESFQMWELNRRLEAYLGRVKALEEQNELLSAGLGGLR RQSADTSWRAHADDELAALRALVDQRWREKHAAEVARDNLAEELEGVAGRCEQLRL ARERTTEEVARNRRAVEAEKCARAWLSSQGAELERELEALRVAHEEERVGLNAQAAC APRLPAPPRPPAPAPEVEELARRLGEAWRGAVRGYQERVAHMETSLDQTRERLARAVQ GAR

EVRLELQQLQAERGGLLERRAALEQRLEGRWQERLRATEKFQLAVEALEQEKQGLQSQ IAQVLEGRQQLAHLKMSLSLEVATYRTLLEAENSRLQTPGGGSKTSLSFQDPKLELQF PRTPEGRRLGSLLPVLSPTSLPSPLPATLETPVPAFLKNQEFLQARTPTLASTPIPPT POAPSPAVDAEIRAODAPLSLLOTOGGRKQAPEPLRAEARVAIPASVLPGPEEPGGQR QEASTGQSPEDHASLAPPLSPDHSSLEAKDGESGGSRVFSICRGEGEGQIWGLVEKET AIEGKVVSSLQQEIWEEEDLNRKEIQDSQVPLEKETLKSLGEEIQESLKTLENQSHET LERENQECPRSLEEDLETLKSLEKENKRAIKGCGGSETSRKRGCRQLKPTGKEDTQTL QSLQKENQELMKSLEGNLETFLFPGTENQELVSSLQENLESLTALEKENQEPLRSPEV GDEEALRPLTKENOEPLRSLEDENKEAFRSLEKENQEPLKTLEEEDQSIVRPLETENH KSLRSLEEQDQETLRTLEKETQQRRRSLGEQDQMTLRPPEKVDLEPLKSLDQEIARPL ENENQEFLKSLKEESVEAVKSLETEILESLKSAGQENLETLKSPETQAPLWTPEEINK SGGNESSRKGNSRTTGVCGSEPRDIQTPGRGESGIIEISGSMEPGEFEISRGVDKESQ RNLEEEENLGKGEYQESLRSLEEEGQELPQSADVQRWEDTVEKDQELAQESPPGMAGV ENKDEAELNLREQDGFTGKEEVVEQGELNATEEVWFPGEGHPENPEPKEQRGLVEGAS VKGGAEGLQDPEGQSQQVGTPGLQAPQGLPEAIEPLVEDDVAPGGDQASPEVMLGSEP AMGESAAGAEPGLGQGVGGLGDPGHLTREEVMEPPLEEESLEAKRVQGLEGPRKDLEE AGGLGTEFSELPGKSRDPWEPPREGREESEAEAPRGAEEAFPAETLGHTGSDAPSPWPLGSEEAEEDVPPVLVSPSPTYTPILEDAPGLQPQAEGSQEASWGVQGRAEAGKVESEQ EELGSGEIPEGLQEEGEESREESEEDELGETLPDSTPLGFYLRSPTSPRWTPLESRGH PLKETGKEGWDPAVLASEGLEEPSEKEEGEEGEECGRDSDLSEEFEDLGTEAPFLPG VPGEVAEPLGQVPQLLLDPAAWDRDGESDGFADEEESGEEGEEDQEEGREPGAGRWGP ${\tt GSSVGSLQALSSSQRGEFLESDSVSVSVPWDDSLRGAVAGAPKTALETESQDSAEPSG}$ SEEESDPVSLEREDKVPGPLEIPSGMEDAGPGADIIGVNGQGPNLEGKSQHVNGGVMN GLEQSEESGARNALVSEGDRGSPFQEEEGSALKRSSAGAPVHLGQGQFLKFTQREGDR ESWSSGED"

Nestin Nucleotide Sequence:

BASE COUNT 1238 a 1176 c 1676 g 764 t ORIGIN 1

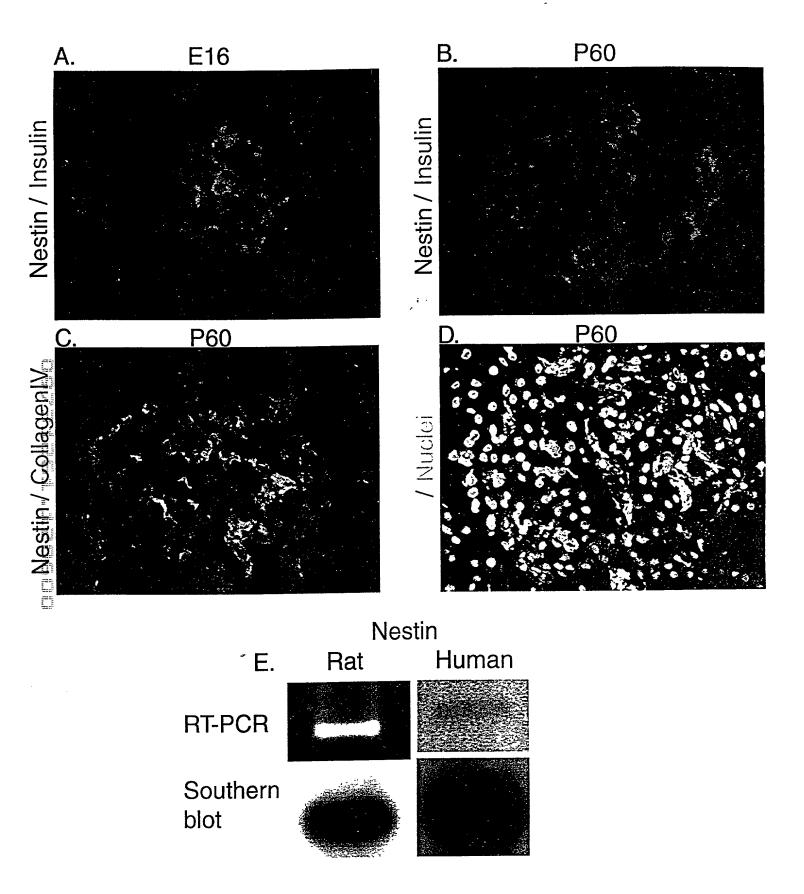
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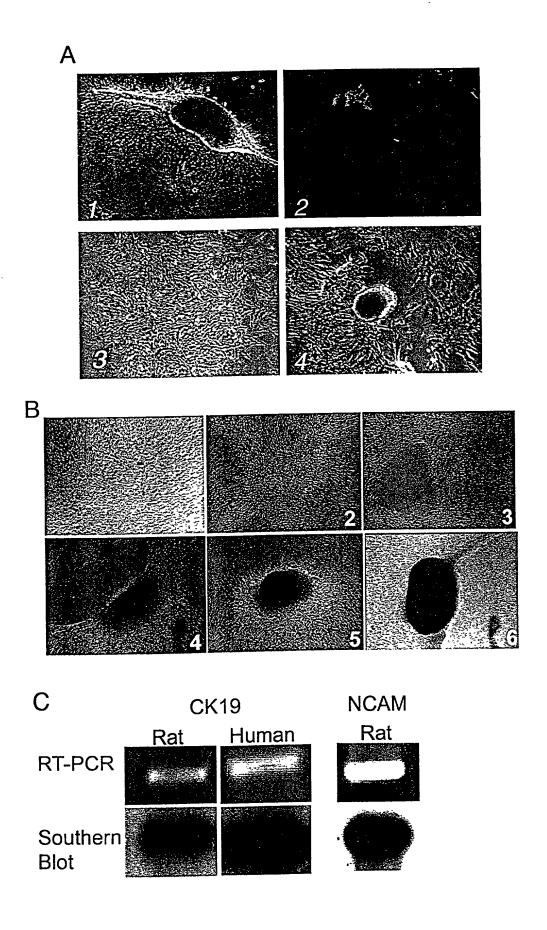
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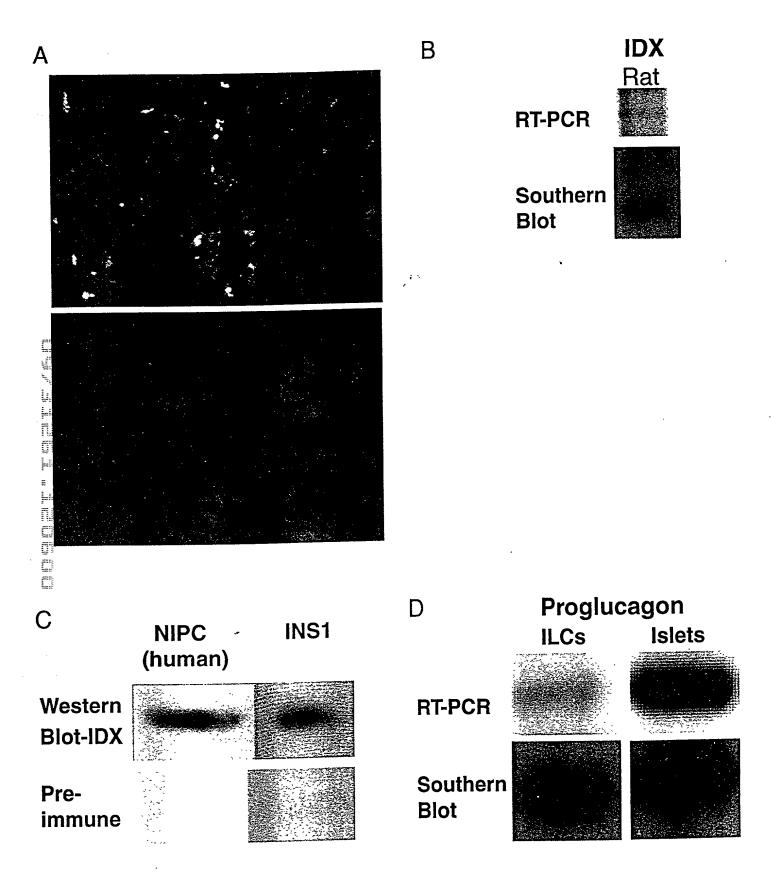
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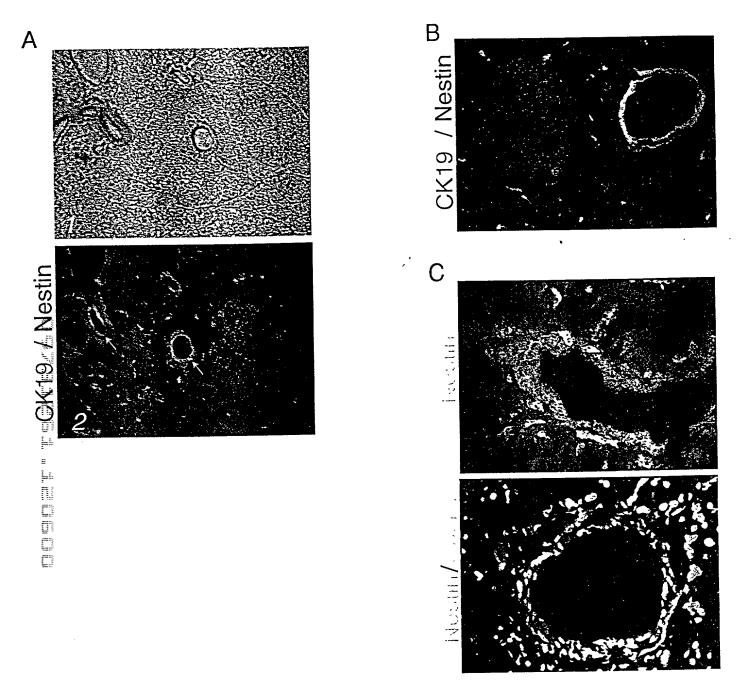
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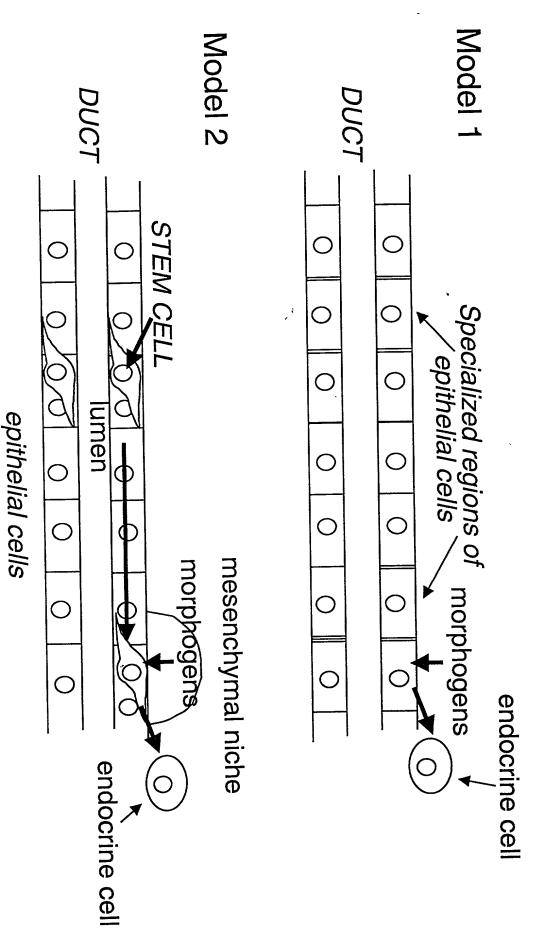
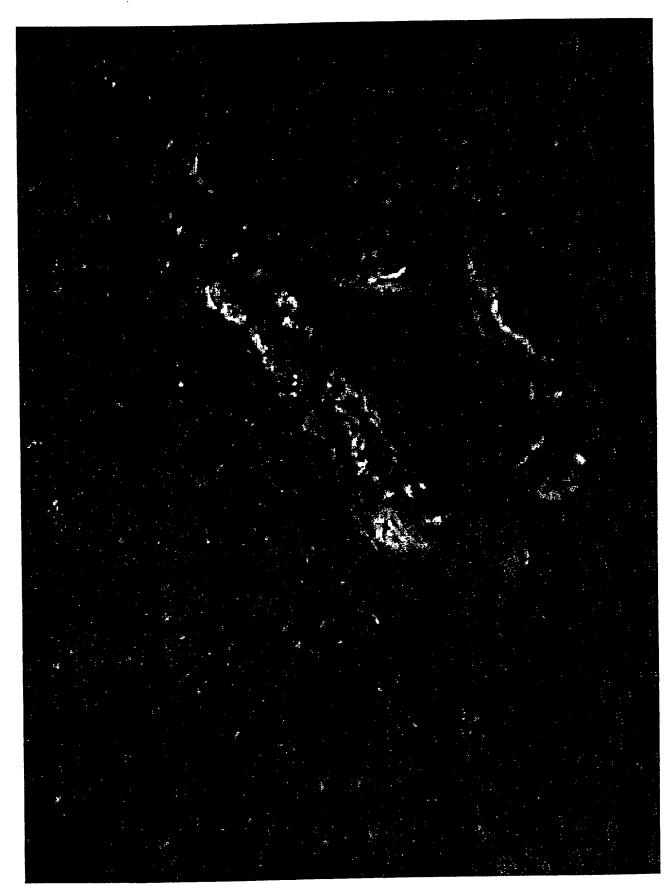
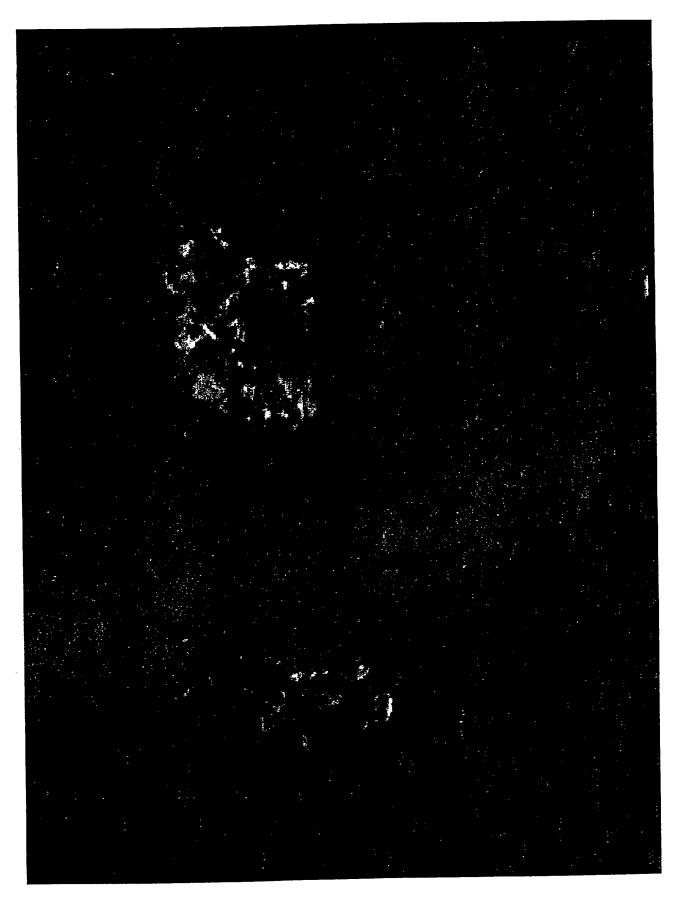


FIG 12

Zulewski et al., Fig. :



F16 13 A



F16 13 B

Sequential appearance of transcription factors during development of the endocrine pancreas (mouse)

Jay: E8.5

E9.5

st transition

E13

日14

E15

2nd transition

Beta2/neuroD

Isl1 Pax6 Nkx6.1

PDX-1 Ngn-3 No hormones

glucagon (insulin)

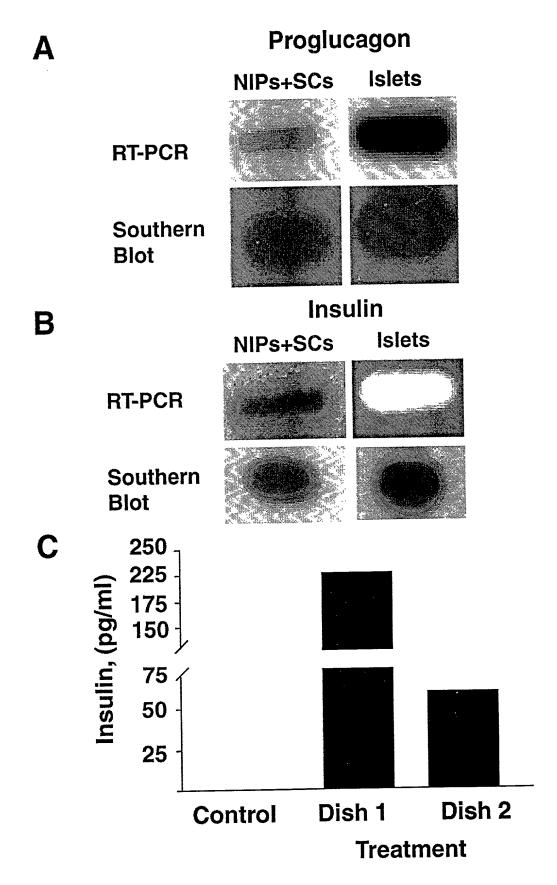
PDX-1

differentiation

Stem

proliferation Progenitor cell

Brain-4 Beta2/neuroD **ISI**1



NEURO-ENDOCRINE

EXOCRINE

HEPATIC

SYN



AMY



TTR



HGFR



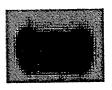
CARB



HGF



GLUT-2



E-CAD



XBP



AFP